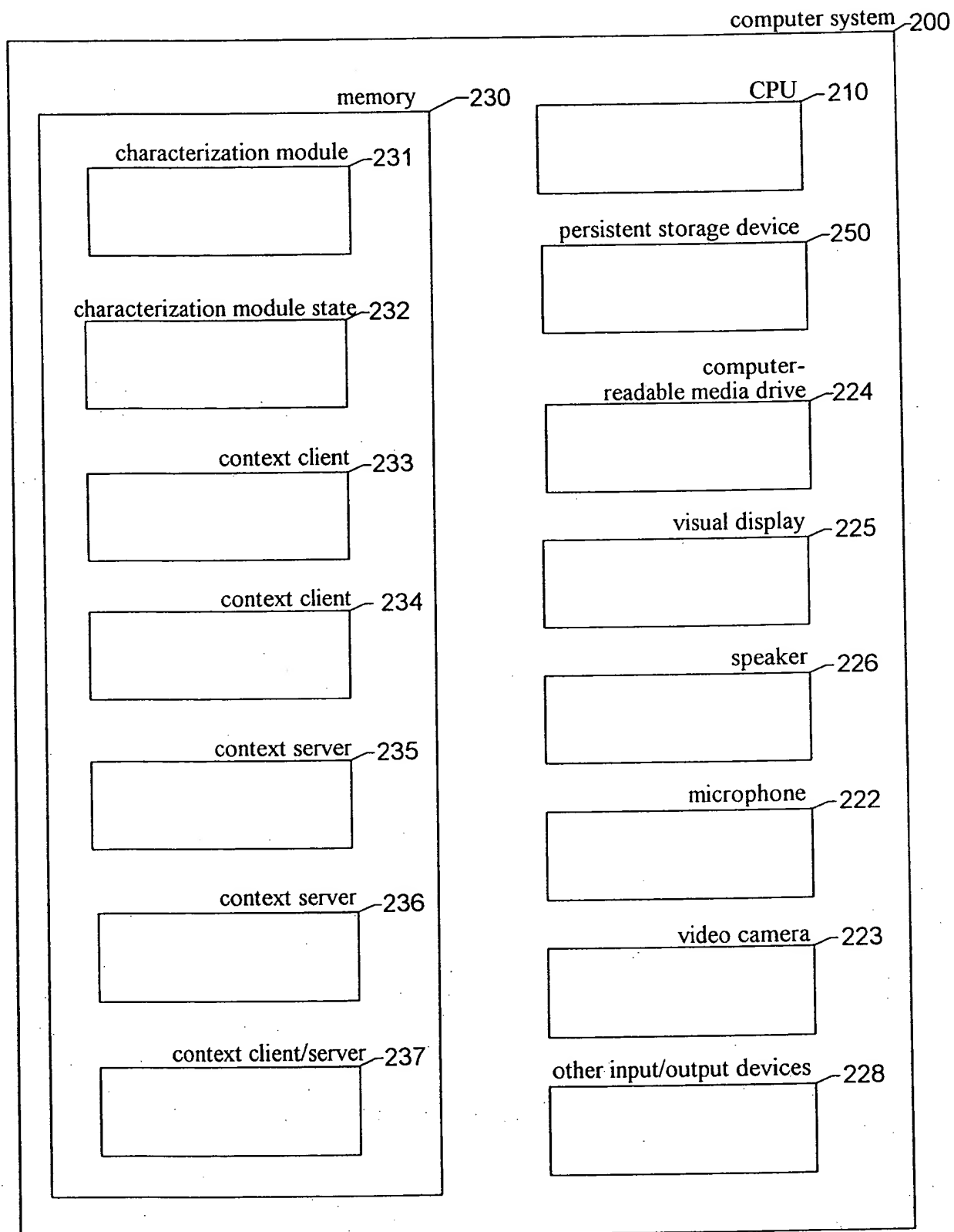
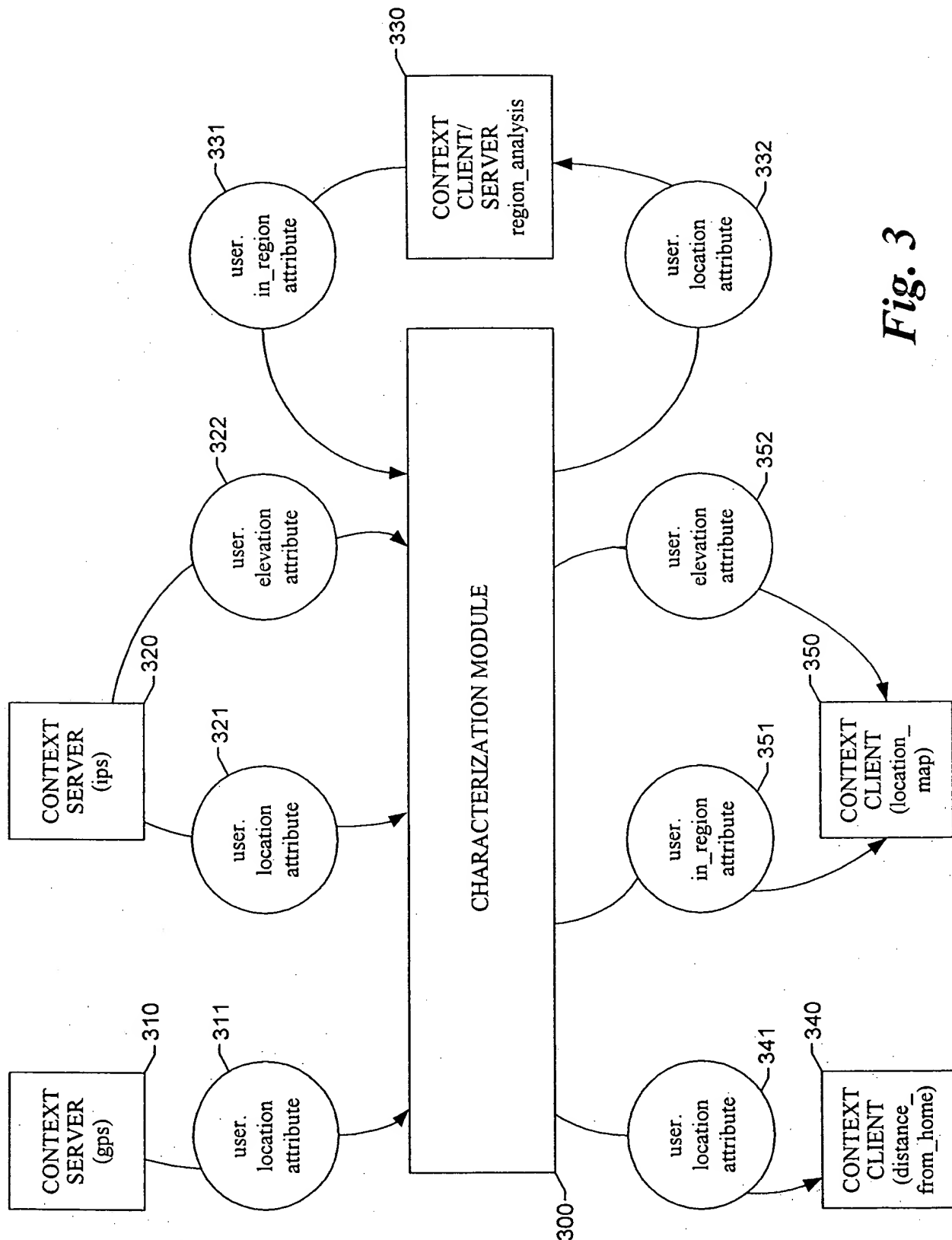


Fig. 1



**Fig. 2**



*Fig. 3*

context server table 400				
context server name	version	installation date	filename	request handler
gps 401	1	2/10/2000	gps.exe	(reference)
ips 402	1	2/21/2000	ips.exe	(reference)
location_region_analysis 403	1	2/10/2000	l_r_a.exe	(reference)

**Fig. 4**

attribute instance table							
attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming	
user.location 501	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2	
user.location 502	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2	
user.elevation 503	ips	22	.5	13:11:01.118 2/22/2000	meters	1	
user.in_region 504	location_region_analysis	none	none	none	none	0	

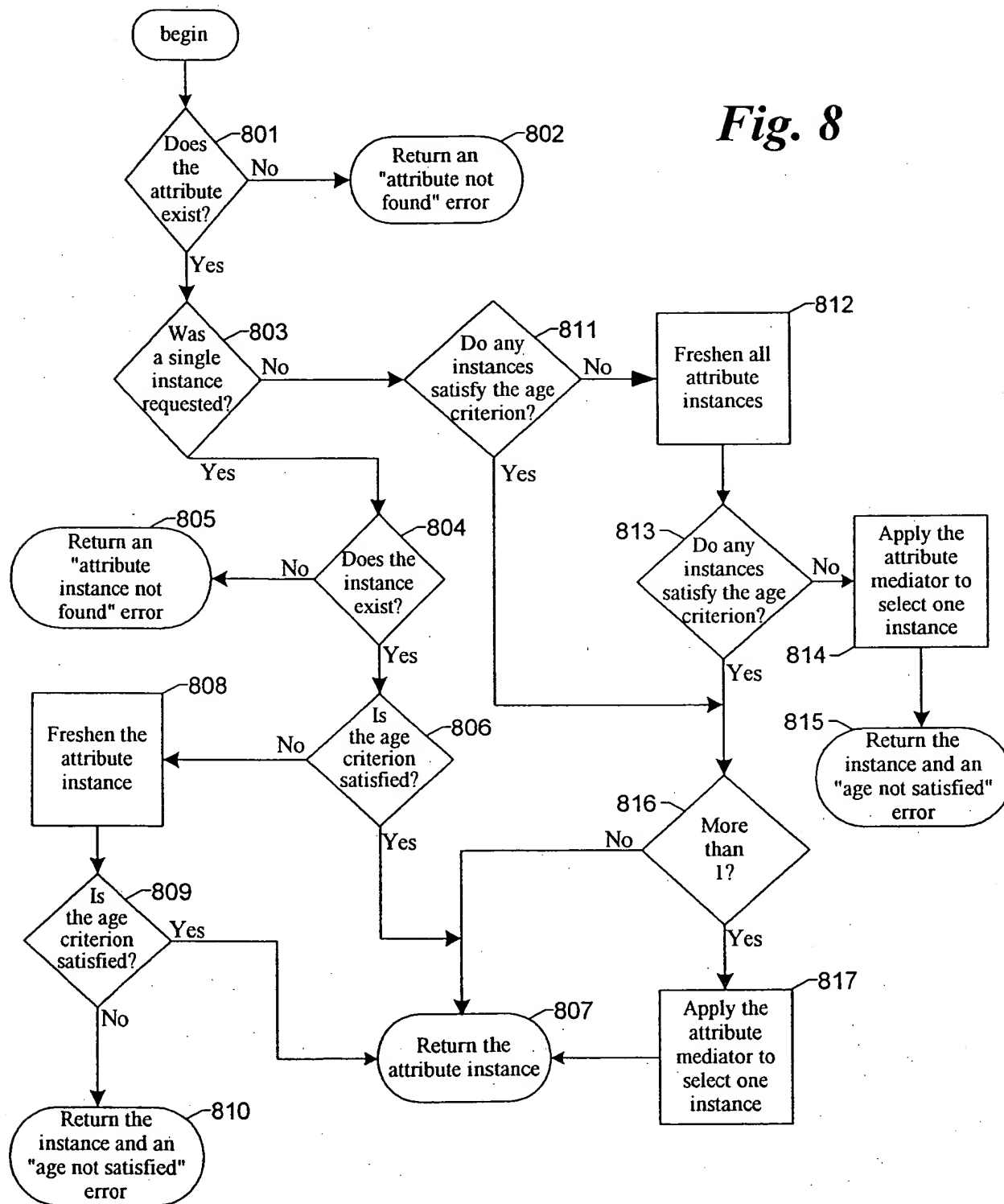
**Fig. 5**

600	context client name	context client table
601	location_map	message handler
602	distance_from_home	(reference)
603	region_analysis	(reference)

**Fig. 6**

700	attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
701	user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
702	user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
703	user.elevation	ips	22	.5	13:11:01.118 2/22/2000	meters	1
704	user.in_region	location_region_analysis	none	none	none	none	1

**Fig. 7**

*Fig. 8*

**"REPLACEMENT SHEET"**

attribute instance table

attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
user.elevation	ips	22.25	.5	13:11:06.565 2/22/2000	meters	1
user.in_region	region_analysis	none	none	none	none	1

**Fig. 9**

condition table

condition name	context client name	first logical parameter	second logical parameter	comparison value	logical operator
in_region_true	region_analysis	user.in_region	none	TRUE	=

**Fig. 10**

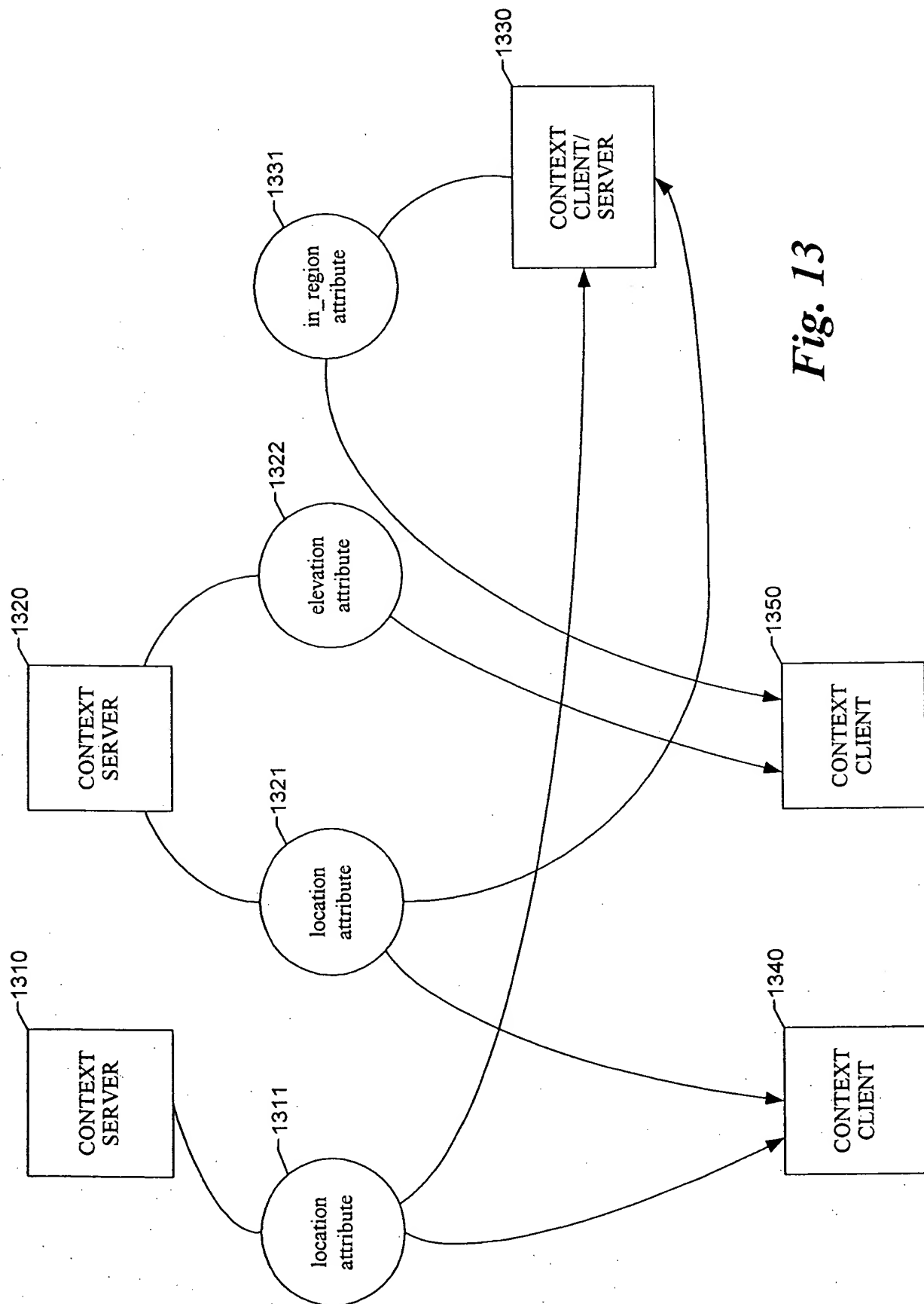
1100	condition monitor name	region_boundary_crossed	context client name	in_region_true	behavior	frequency	condition last evaluated	trigger handler reference	stopped
1101			region_analysis		TRUE or FALSE	30	13:11:29.101 2/22/2000	(reference)	no
		1111	1112	1113	1114	1115	1116	1117	1118

*Fig. 11*

1200	condition monitor name	region_boundary_crossed	context client name	in_region_true	behavior	frequency	condition last evaluated	trigger handler reference	stopped
1201			region_analysis		TRUE or FALSE	30	13:11:59.101 2/22/2000	(reference)	yes
	1211	1212	1213	1214	1215	1216	1217	1218	

*Fig. 12*





*Fig. 13*

**Fig. 14**

**Fig. 14**

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**"REPLACEMENT SHEET"**

**User.**

Desired\_privacy\_level  
 Interruptibility  
 Speed  
 Direction  
 Acceleration  
 Availability.  
     Cognitive\_availability  
     Tactile\_availability  
     Manual\_availability  
     Visual\_availability  
     Oral\_availability  
     Auditory\_availability

Proximity.<Item or place name>

**Mood.**

Happiness  
 Sadness  
 Anger  
 Frustration  
 Confusion

**Activity.**

Driving  
 Eating  
 Running  
 Sleeping  
 Talking  
 Typing  
 Walking

**Location.**

Place\_name  
 Latitude  
 Longitude  
 Altitude  
 Room  
 Floor  
 Building  
 Address  
 Street  
 City  
 County  
 State  
 Country  
 Postal\_Code

Destination. (same as User.Location.)

**Physiology.**

Pulse  
 Body\_temperature  
 Blood\_pressure  
 Respiration

**Person.<name or ID>. (same as User.)**

**Platform.**

**UI.**

Oral\_input\_device\_availability  
 Manual\_input\_device\_availability  
 Tactile\_output\_device\_availability  
 Visual\_output\_device\_availability  
 Auditory\_output\_device\_availability

**Platform. (continued)**

**CPU.**

Load  
 Speed

**Memory.**

Total\_capacity  
 Used

**Storage.**

Total\_capacity  
 Used

**Connectivity.**

Connection\_status  
 Connection\_speed  
 Connection\_type/device  
 Connection\_activity

**Power.**

Power\_source  
 Power\_level

**Environment.**

**People.**

Nearest  
 Number\_present  
 Number\_close

**Local.**

Time  
 Date  
 Temperature  
 Pressure  
 Wind\_speed  
 Wind\_direction  
 Absolute\_humidity  
 High\_forecast\_temperature  
 Low\_forecast\_temperature  
 People\_present  
 Ambient\_noise\_level  
 Ambient\_light\_level  
 Days.<previous or future>.  
     High\_temperature  
     Low\_temperature  
     Precipitation\_type  
     Precipitation\_amount

Place.<place name>. (same as Environment.Local)

**Application.**

**Mail.**

Available  
 New\_messages\_waiting  
 Messages\_waiting\_to\_be\_sent

**Phone.**

Available  
 In\_use  
 On/off  
 Notification\_mechanism  
 Call\_incoming  
 Caller\_ID

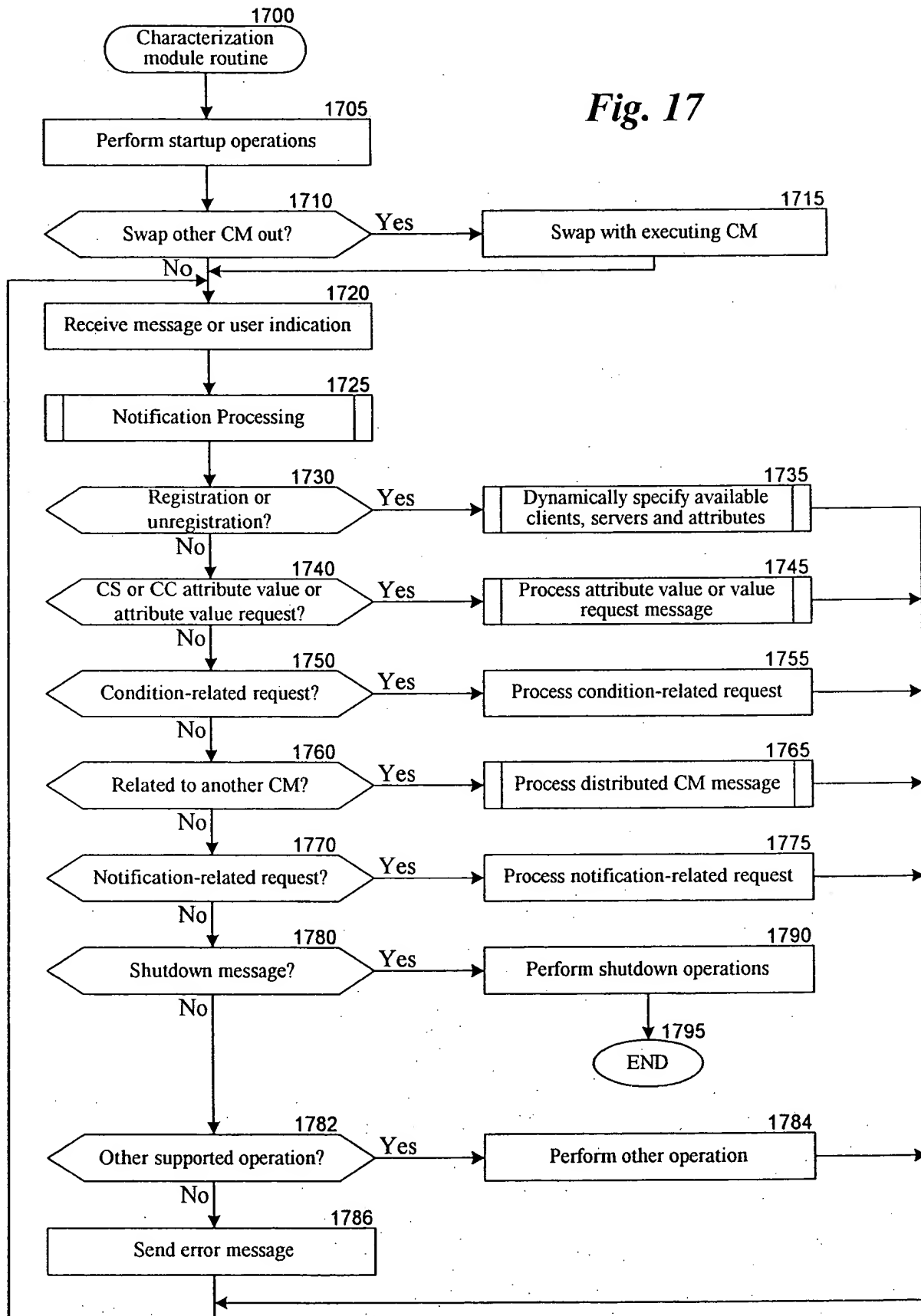
**Sound\_recorder.**

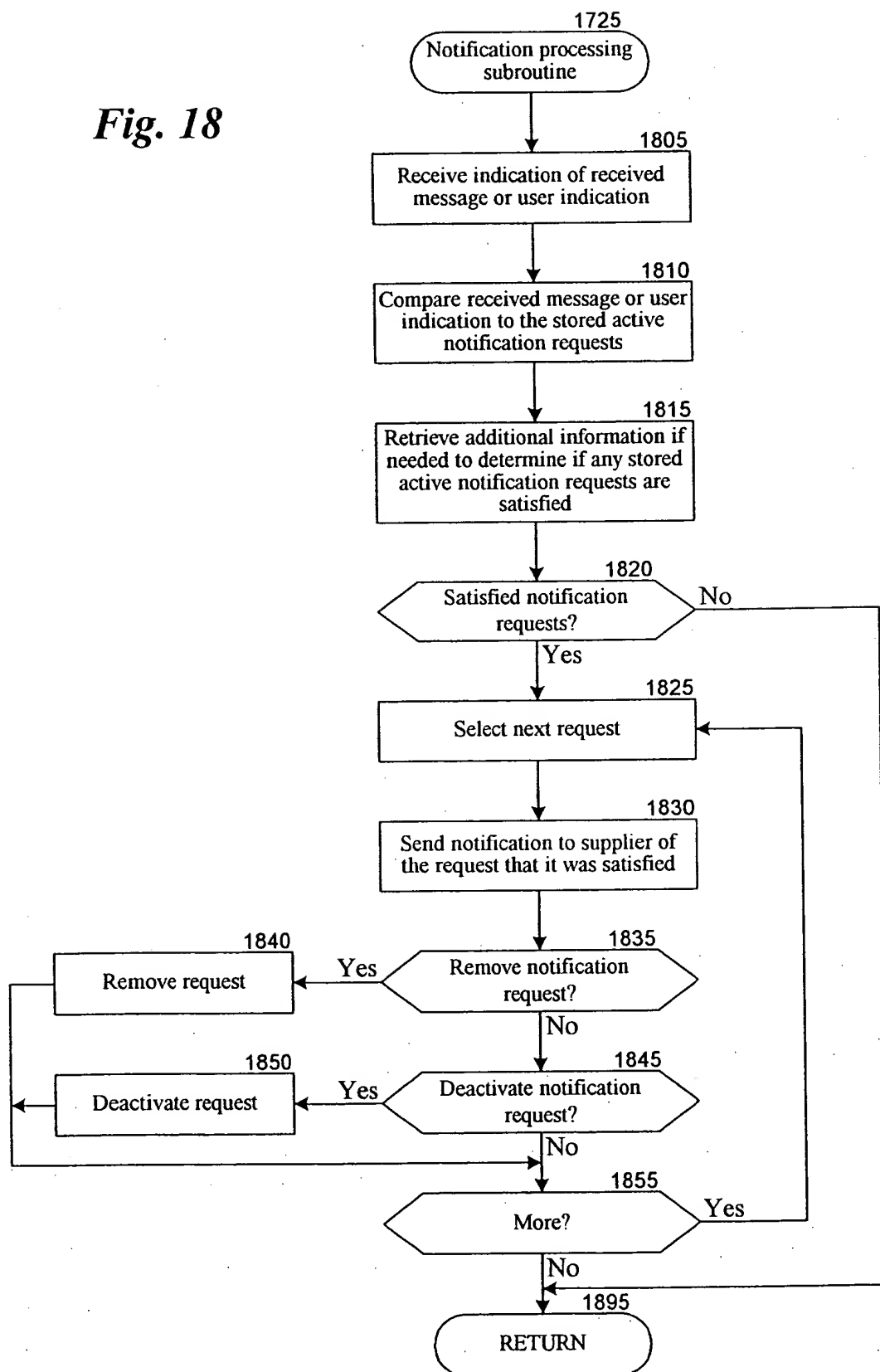
Available  
 Recording

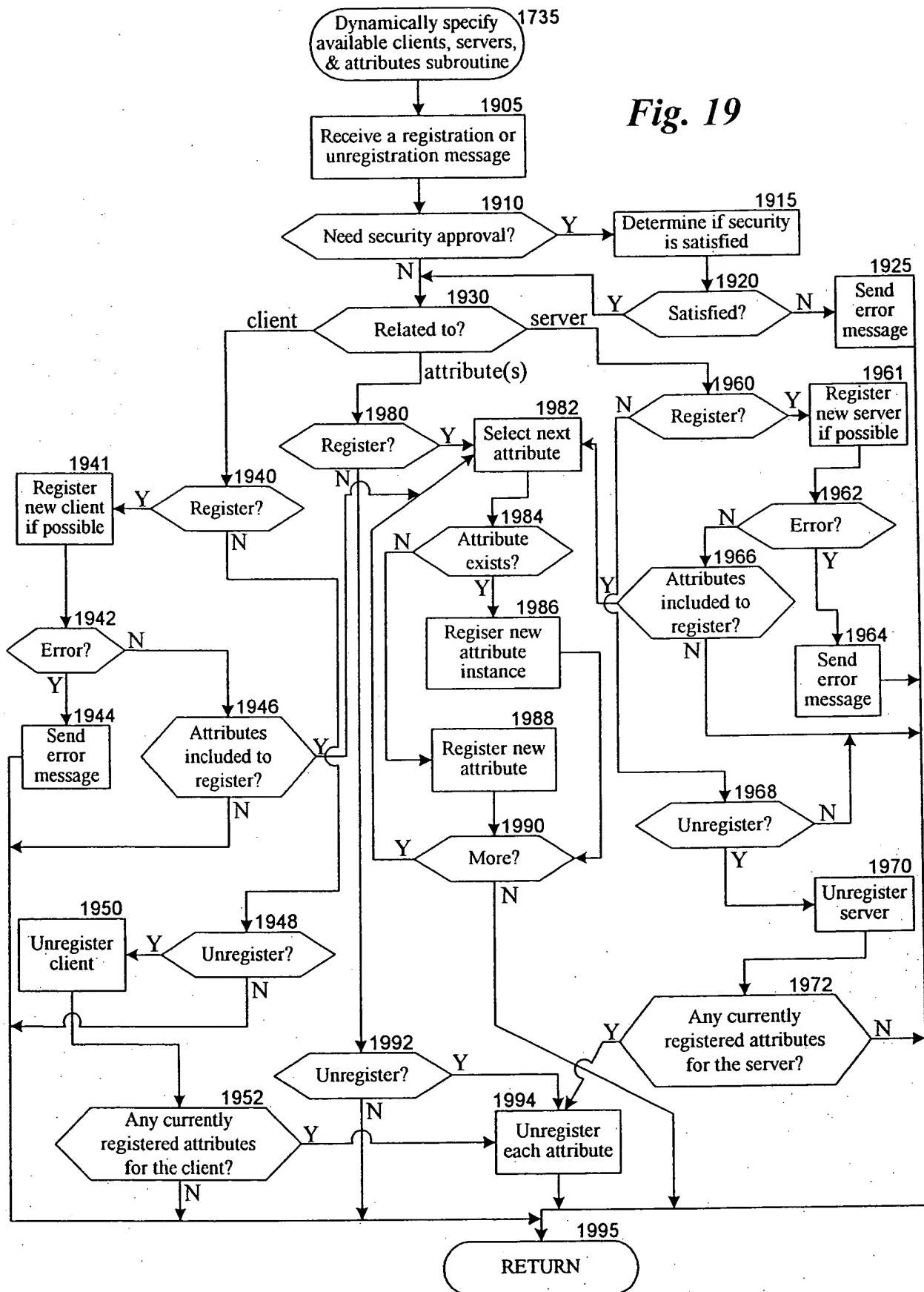
*Fig. 15*

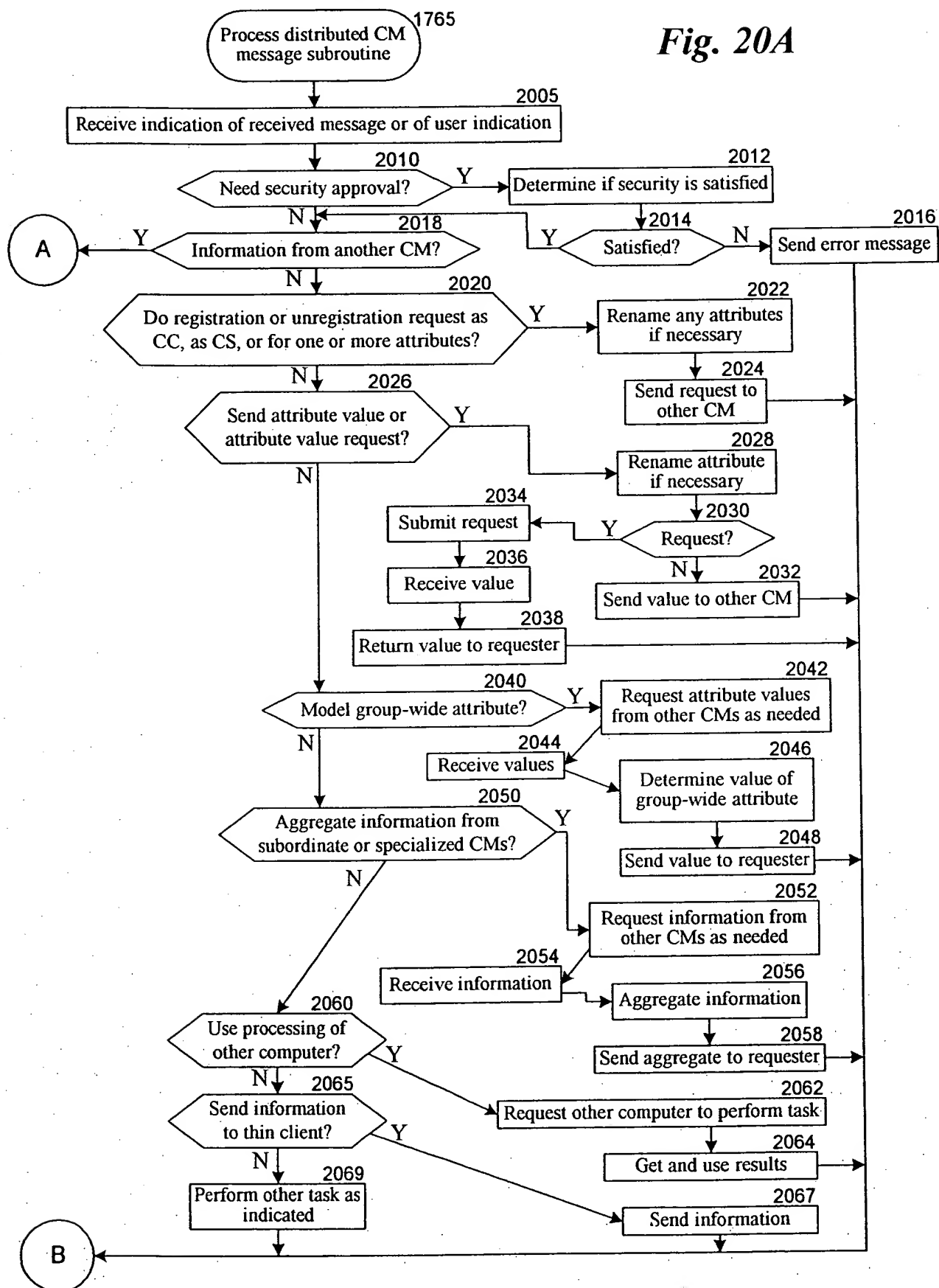
*Fig. 16*

- 1) User Setting
  - a) Mental Context
    - i) Meaning
    - ii) Cognition
      - (1) Divided User Attention
      - (2) Task Switching
      - (3) Background Awareness
    - iii) Solitude
    - iv) Privacy
      - (1) Desired Privacy
      - (2) Perceived Privacy
    - v) Social Context
    - vi) Affect
  - b) Physical Situation
    - i) Body
      - (1) Biometrics
      - (2) Posture
      - (3) Motion
      - (4) Physical Encumbrment
        - (a) Senses
          - (i) Eyes
          - (ii) Ears
          - (iii) Tactile
          - (iv) Hands
          - (v) Nose
          - (vi) Tongue
        - (b) Workload demands/effects
        - (c) Interaction with computer devices
        - (d) Interaction with people
        - (e) Physical Health
    - ii) Environment
      - (1) Time/Space
      - (2) Objects
      - (3) Persons
        - (a) Audience/Privacy Availability
          - (i) Scope of Disclosure
          - (ii) Hardware affinity for privacy
          - (iii) Privacy Indicator for User
          - (iv) Privacy Indicator for Public
          - (v) Watching Indicator
          - (vi) Being Observed Indicator
      - (4) Ambient Interference
        - (a) Visual
        - (b) Audio
        - (c) Tactile
- 2) Computer
  - a) Power
  - b) Configuration
    - i) User Input Systems
      - (1) Hand/Haptic
        - (a) Keyboard/Keystrokes
      - (2) Voice/Audio
      - (3) Eye Tracking
      - (4) Cursors
        - (a) Axis
        - (b) Resolution
          - (i) Selection
          - (ii) Invocation
        - (c) Accelerators
    - ii) Output Systems
      - (1) Visual
        - (a) Resolution
      - (2) Audio
        - (a) Public/Private
      - (3) Haptic
    - iii) External Resources
      - (1) I/O devices
      - (2) Connectivity
  - c) Data
    - i) Quantity/State
    - ii) Urgency/Importance
      - (1) Use of Prominence
    - iii) Modality
    - iv) Sensitivity/Purpose
      - (1) Privacy Issues
      - (2) Use of Association
      - (3) Use of Safety
    - v) Source/Ownership
      - (1) Types
        - (a) User generated
        - (b) Other computers or people
        - (c) Sensor
        - (d) PC State
      - (2) Use of Association

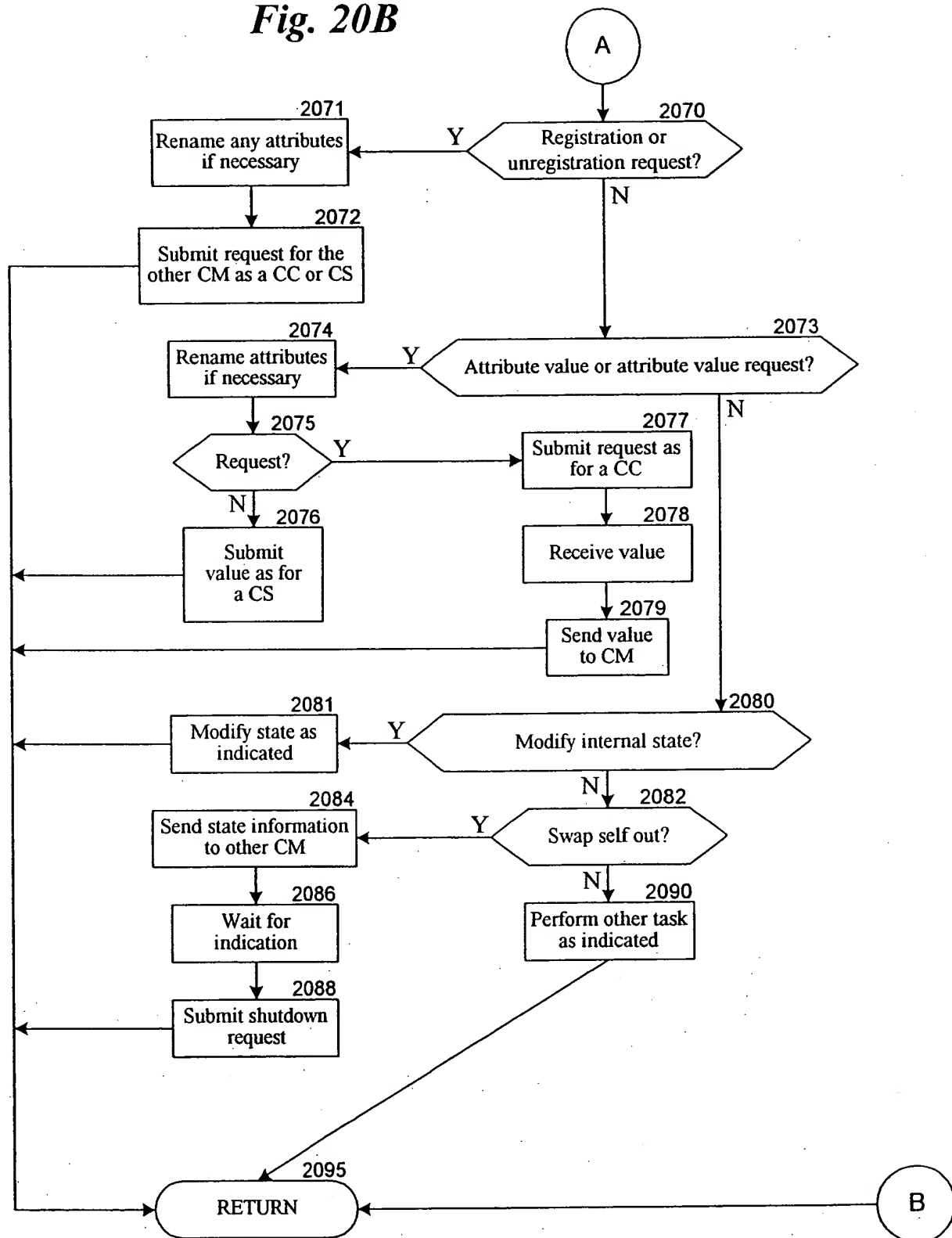
**"REPLACEMENT SHEET"****Fig. 17**

**Fig. 18**

**"REPLACEMENT SHEET"**

**Fig. 20A**



**Fig. 20B**

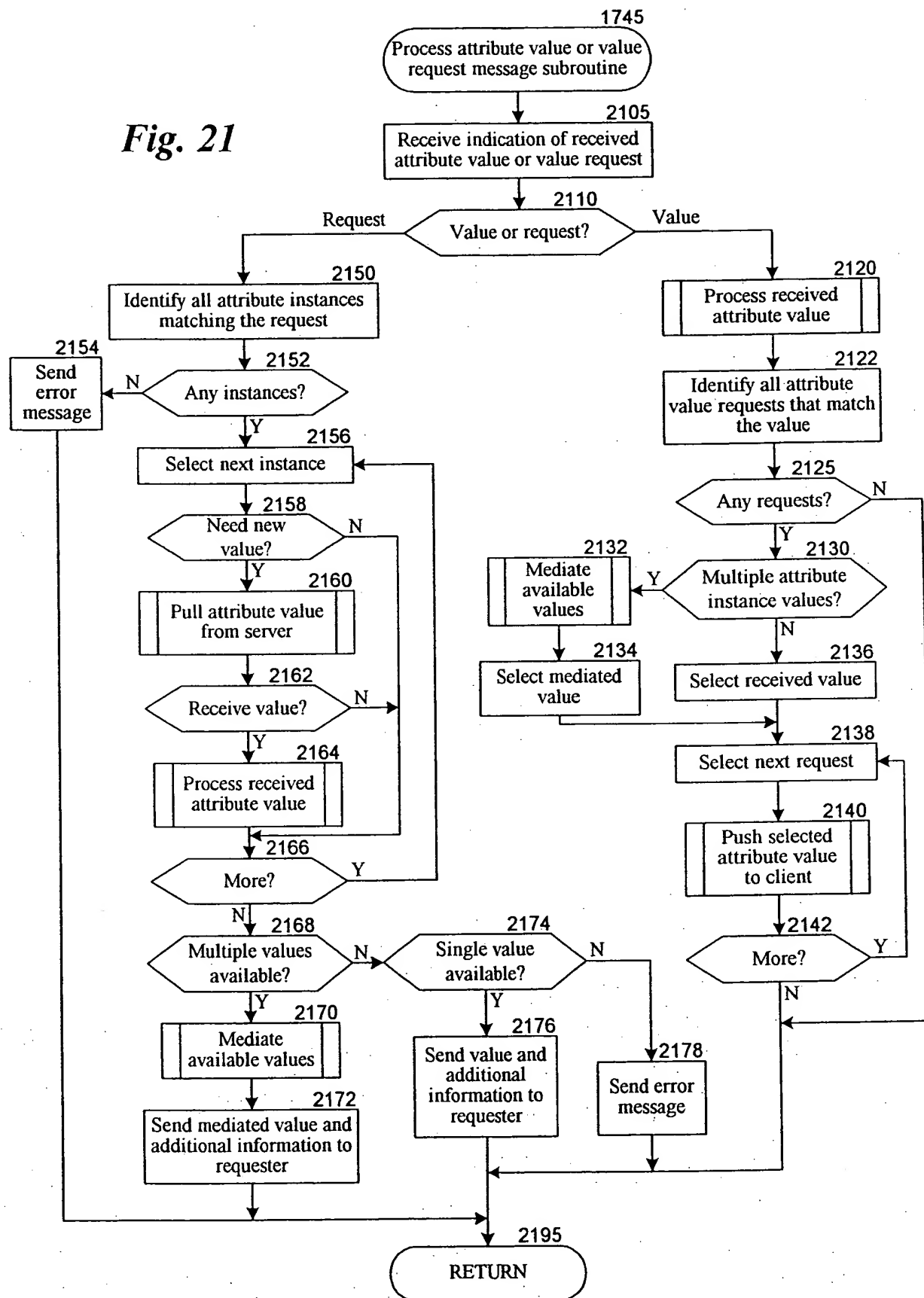
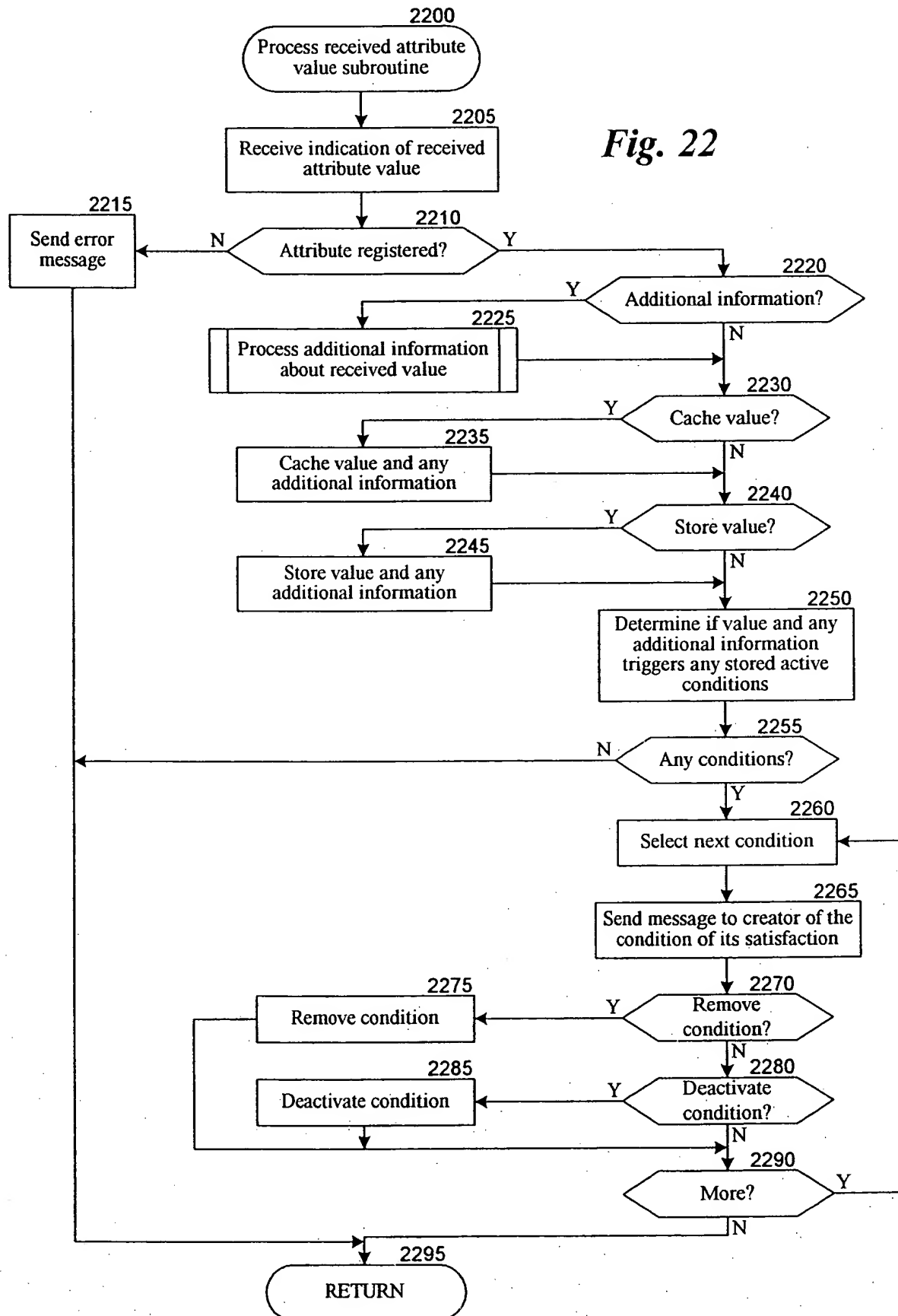
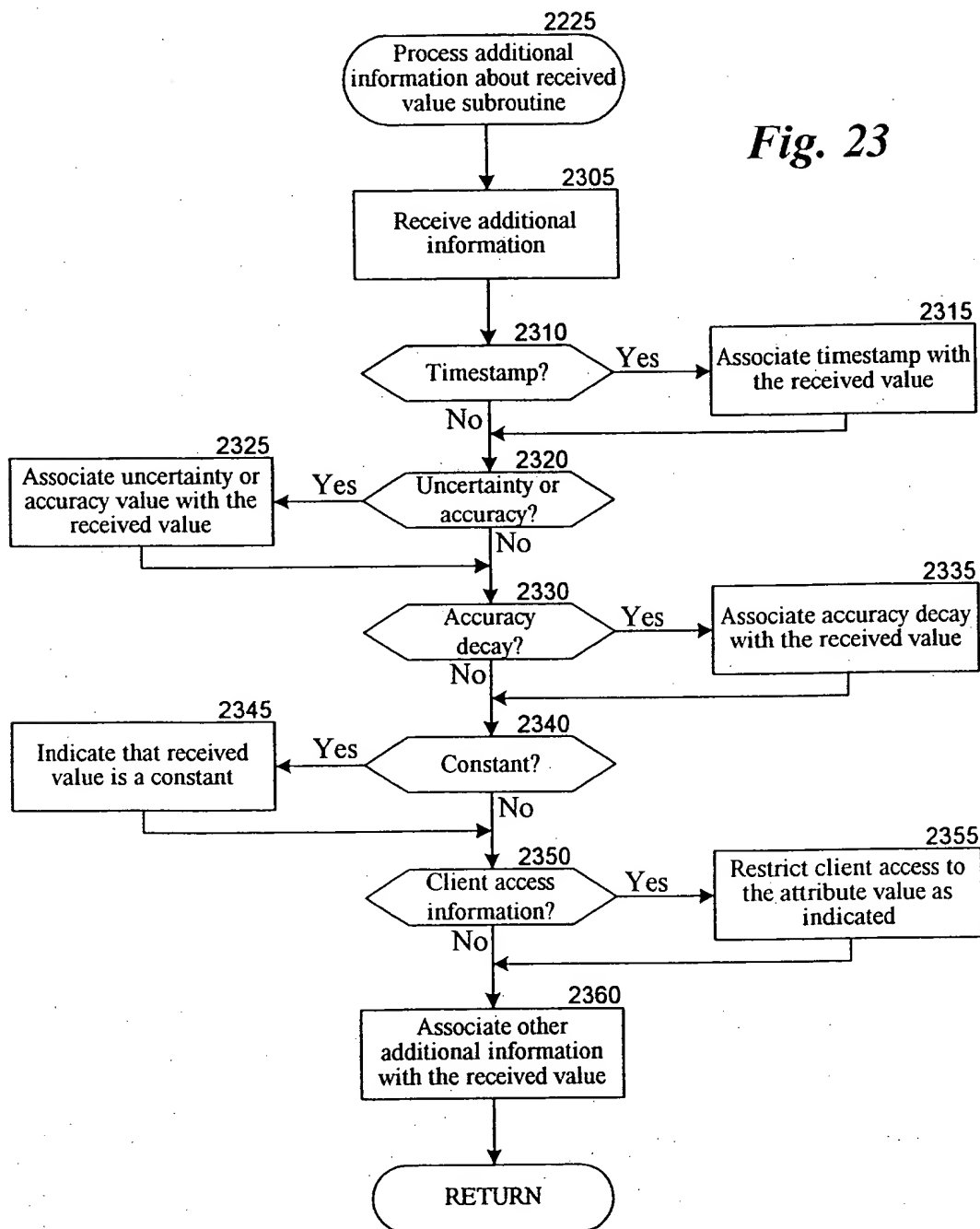
**Fig. 21**

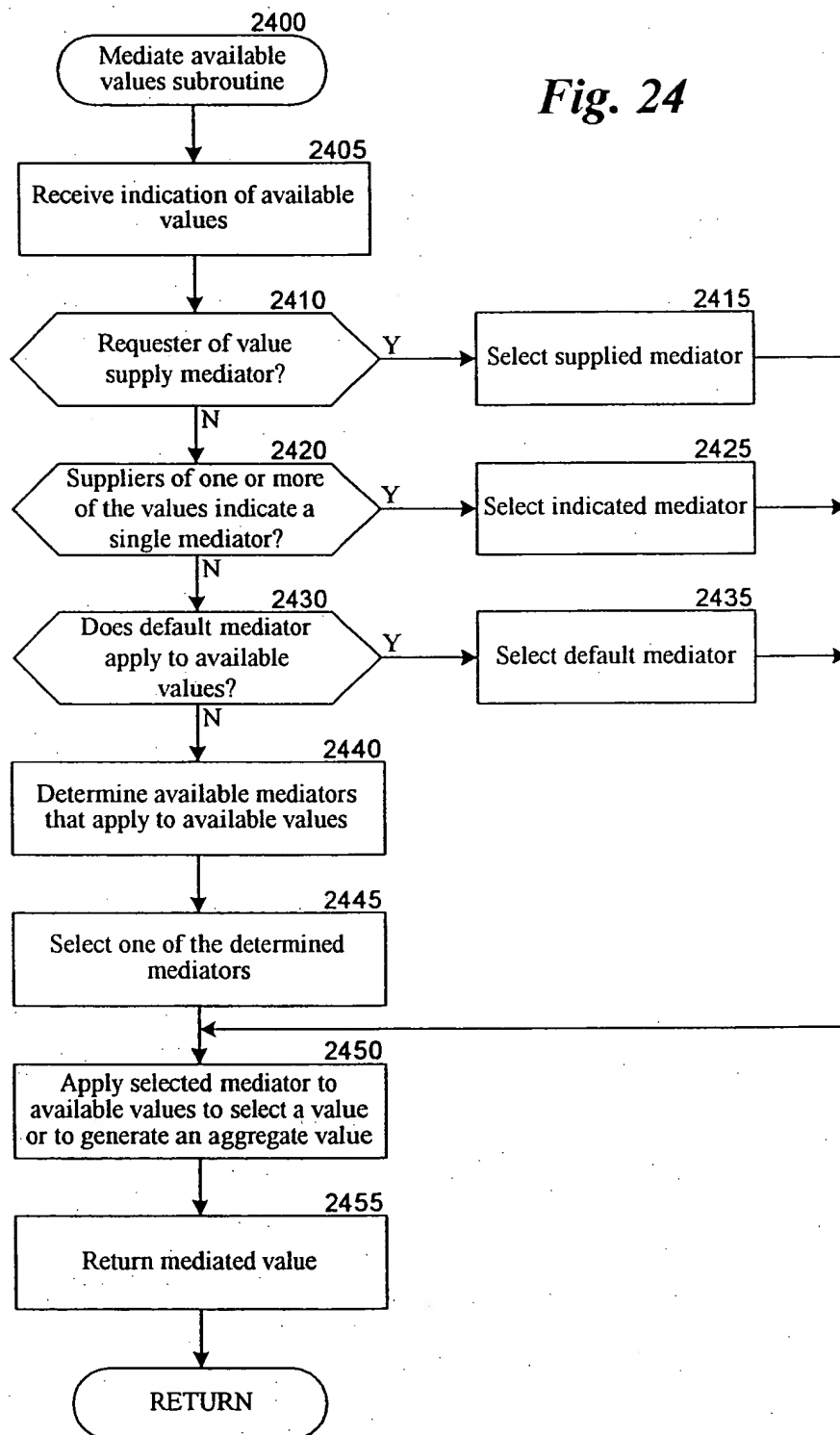
Fig. 22



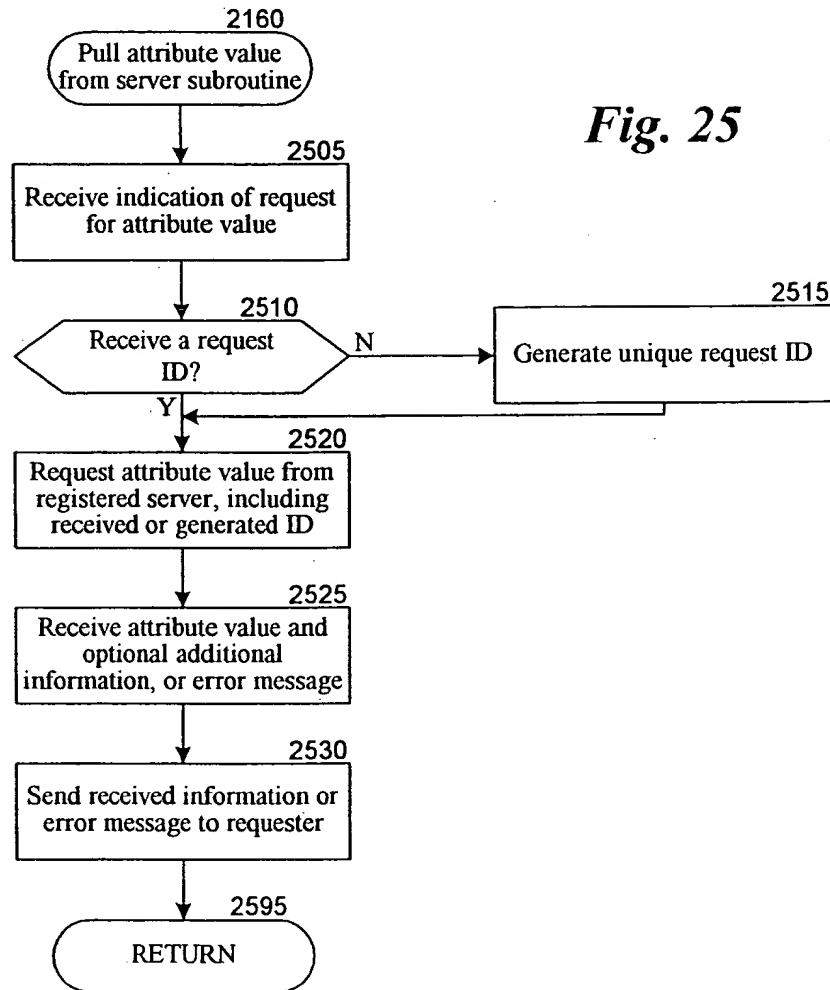
*Fig. 23*



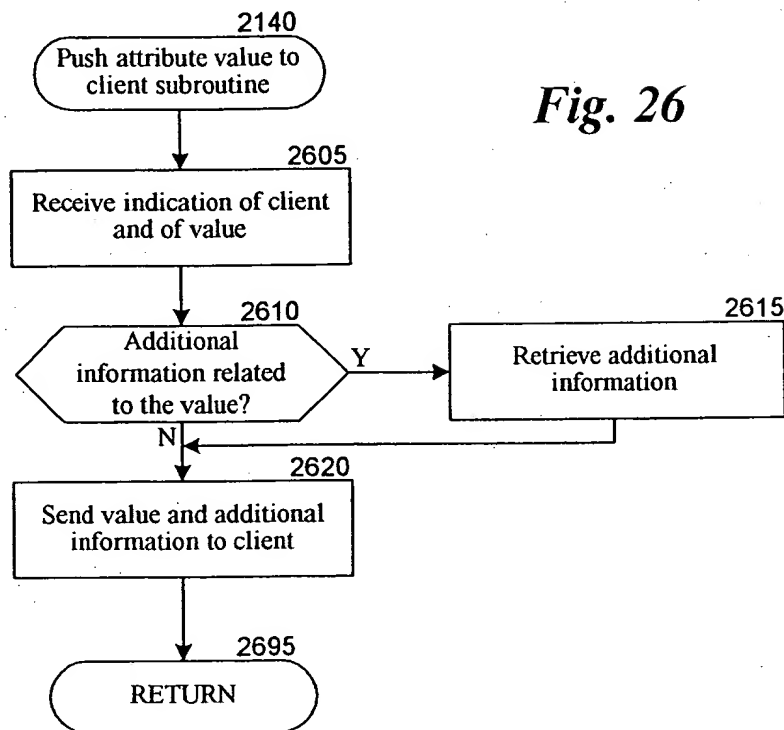
*Fig. 24*

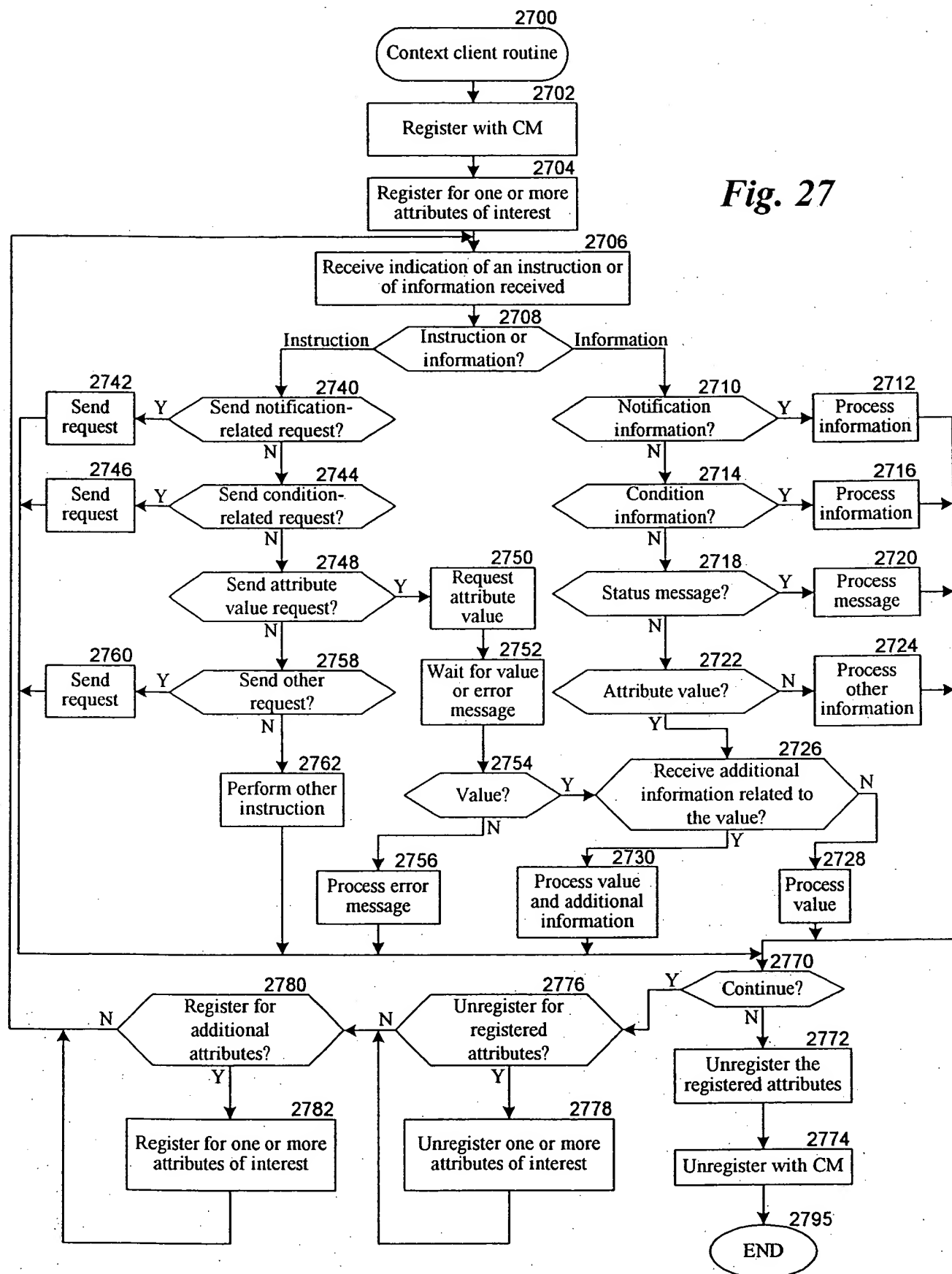


*Fig. 25*



*Fig. 26*



**Fig. 27**



**Fig. 28**